

# The Citeco

Official Publication of the Experimental Aircraft Association  
EAA Chapter #393 POBox 272725 Concord, CA 94527-2725

APRIL 1999

## CHAPTER MEETING APRIL 28, 1999

How much do you know about the spark plugs you are using in your engine? How do you know when it is time to replace a plug that appears to be functioning normally? What is the proper procedure for "rotating" spark plugs, and how often should it be done? Is it really necessary to discard any plug you have dropped... even if there is no visible damage observed during careful inspection? Does it make a difference what type of sand you use to "clean" your plugs? Where would you go to determine what the correct model, heat range, and "gap" for the plugs in your engine? How effective are platinum plugs and /or fuel additives in reducing lead build-up in your engine? Come bring your toughest questions --- and learn the answers --- to these and many other questions when we are joined by guest speaker **Frank Gurko**, from the aviation division of Champion Products, Wednesday, April 28th at 7:30 PM in the old terminal building near the base of the Control Tower.

## HAVE YOU PAID YOUR DUES?

50 members have not! The \$20 annual dues charge was delinquent as of February 1. Our Treasurer has handcuffs and various other tortures and penalties for those who do not pay. Please pay now! Fill out and return the form on the last page to EAA Chapter 393, P.O. Box 272725, Concord, CA 94527-2725 with \$20.00.

## PRESIDENT'S CORNER

Spring is here and it's time to start thinking of the many aviation activities coming up this season: Young Eagles Flights, Buchanan Airport Open House on June 19, Moffett Field Airshow on June 20, Golden West Fly In September 10, 11 & 12, as well as the more distant events, Sun & Fun and Oshkosh.

I hope that you will support the Buchanan Wings and Wheels Airshow by displaying your airplane and talking to the public about what we do and how we enjoy being part of the aviation community.

Some information from EAA Headquarters:

1. Two years ago EAA changed its policy to allow non-members along with EAA members access to the flight line at Oshkosh. This change sparked numerous complaints from members that a significant benefit of membership had been lost. The 1999 admission policy has been changed back to focus on EAA members and their families. They have created a new "Introductory EAA Member" for \$12 that is good for 3 months and includes 3 issues of Sport Aviation.
2. I have received nomination forms for several awards that will be presented at Air Venture '99. The categories are: 1999 EAA Most Innovative Chapter/Squadron Yearly Activities Award; Chapter/Squadron Spirit Award; Most Innovative Membership Recruitment Idea Award; and Major Achievement Award.

The deadline for submitting nominations is May 30, 1999.

3. The EAA Aviation Foundation is looking for trainer-students to fill their Work-Study and Internship positions. Each is a paid position offering room & board at the EAA Air Academy in Oshkosh. The positions are for June through mid August '99. Those selected will play a key role in presenting the summer Youth Air Academy Programs, while extending their own aviation horizons and training.
4. The EAA Aviation Books & Videos Catalog has arrived. All items are available @ 50% discount until April 30.

More about all of this at our April 28 Meeting.  
Fly Safely,  
Ron Robinson

#### **YOUNG EAGLES SATURDAY APRIL 17**

The next Young Eagles Flight will be April 17, 1999 from 9 AM to 12 Noon. Duane Allen would like to have ground volunteers there before 9 to help him set up.

#### **WINGS AND WHEELS AIRSHOW & MOFFETT FIELD AIRSHOW**

The County and Buchanan Field will sponsor this event again this year the day before Father's Day, on Saturday, June 19 from 9:00 AM to 5:00 PM. EAA Chapter 393 will have a roped off area so that we can display our planes. Since it is on Saturday, you can still make it to Moffett Field on June 20, 1999 for the Airshow there.

#### **LOUIS GOODELL, WE APPRECIATE YOU!**

For more years than even Louis can remember, he has been the Chapter 393 Treasurer, first friendly face to greet new members, arranger of our Christmas Party, and supplier of coffee and cookies for our regular meetings. Louis finances the coffee and cookies out of his own pocket, so make sure you donate if you partake. Louis, we appreciate you!

#### **SEND A LETTER TO FAA REGARDING ANY MODIFICATION!**

#### UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

AVEMCO INSURANCE COMPANY,  
Plaintiff-Appellee,

v.

WILLIAM DAVENPORT,

Defendant-Appellant,

Filed April 7, 1998

#### OPINION

MAGILL, Senior Circuit Judge:

Avemco Insurance Company (Avemco) issued an insurance policy covering William Davenport's home-built experimental aircraft. After Davenport's aircraft crashed on May 7, 1995, Avemco sought a declaration from the district court that, because Davenport had not complied with the terms of the policy, Avemco had no duty to defend or indemnify Davenport for any claims arising from the accident. The district court granted summary judgment in Avemco's favor, and Davenport now appeals. We affirm.

Davenport, an experienced pilot and builder of experimental aircraft, holds a private pilot certificate and a repairman's certificate issued by the Federal Aviation Administration (FAA). Prior to the events giving rise to this case, Davenport built a "VariEze" aircraft from plans he purchased from Rutan Aircraft. Davenport eventually sold the VariEze and began building a second aircraft in 1992. The second plane was built largely from Rutan Aircraft's "Long EZ" plans. Because Davenport made several modifications to these plans, he refers to his hybrid design as the "Davenport Long EZ."

In September 1994, Davenport purchased an amateur-built aircraft insurance policy from Avemco, which provided coverage from September 13, 1994, to September 13, 1995. The policy contained an exclusion from liability that stated:

This Policy does not cover bodily injury, property damage or loss . . . [w]hen your insured aircraft is in flight unless it [ ] is certified for flight by the FAA, initially, and after a modification which requires recertification. Avemco Policy at 3 (emphasis omitted) (Policy Exclusion).

The FAA initially certified Davenport's aircraft as airworthy in April 1993, but conditioned Davenport's airworthiness certificate on thirteen "Operating Limitations." One limitation required that "[t]he cognizant FAA Flight Office must be notified and their response received in writing prior to flying this aircraft after incorporating a major change as defined by [14 C.F.R. S 21.93]." Special Airworthiness Certificate, Operating

**Limitation No. 10 (emphasis added). A major change is any change having any "appreciable effect on the weight, balance, structural strength, reliability, operational characteristics, or other characteristics affecting the airworthiness of the product."** 14 C.F.R. S 21.93(a) (1993).

According to Davenport, his aircraft was equipped with a gravity feed fuel system at the time of the FAA's initial certification. This design relies on gravity to transfer fuel from the fuel tanks through a fuel line and into the engine. After receiving his initial certification, Davenport made a series of changes to his fuel system without notifying the FAA. Davenport first converted the gravity feed system into a pressurized fuel system by installing a mechanical fuel pump and an electric boost pump. After flying the aircraft for fifteen hours, Davenport removed the fuel pumps and reconfigured the system to its original gravity feed design, again without notifying the FAA. Hoping to improve the performance of his aircraft,

Davenport soon reinstalled the mechanized fuel pumps but again failed to inform the FAA of this change. Davenport eventually grew dissatisfied with the pressurized fuel system, and he removed the pumps--once again without notifying the FAA. In sum, following the FAA's initial certification, Davenport made four modifications to the design of his fuel system without notifying the FAA of these changes or seeking FAA recertification of his aircraft.

On May 7, 1995, with the most recent version of the gravity feed fuel system in place, Davenport crashed his aircraft near an airport in Santa Monica, California. The accident caused property damage on the ground, which in turn spawned numerous claims against Davenport in California state courts.

Avemco filed this suit in federal district court, asserting diversity jurisdiction and seeking a declaration that it had no duty to defend or indemnify Davenport for claims arising from the accident. On October 30, 1996, the district court granted summary judgment in Avemco's favor. The district court held that the Policy Exclusion applied because Davenport had not recertified his aircraft after he modified its fuel system without notifying the FAA. Davenport now appeals.

We review the district court's grant of summary judgment de novo. *Wendt v. Host Int'l Inc.*, 125 F.3d 806, 809 (9th Cir. 1997). Summary judgment is appropriate if there is no genuine issue of material fact and if the movant is entitled to judgment as a matter of law. See Fed. R. Civ. P. 56(c).1

Under California law, the language of a contract governs its interpretation "if the language is clear and explicit, and does not involve an absurdity." Cal. Civ. Code S 1638. "[I]f the meaning a layperson would ascribe to contract language is not ambiguous, we apply that meaning." *AIU Ins. Co. v. Superior Court (FMC Corp.)*, 799 P.2d 1253, 1264 (Cal. 1990). Exclusionary language that limits coverage under an insurance policy must be conspicuous and phrased in clear language. *Hertz Corp. v. Home Ins. Co.*, 18 Cal. Rptr. 2d 267, 273 (Cal. Ct.App. 1993).

[1] We hold that the language of the Avemco policy clearly excluded coverage in this case. The Policy Exclusion stated that Davenport's aircraft would be covered only if it was certified for flight "after a modification which requires recertification." Avemco Policy at 3. This language explicitly premised coverage on Davenport's compliance with FAA restrictions. These restrictions included an operating limitation that required Davenport to notify the FAA upon making a change that could affect the "reliability, operational characteristics, or other characteristics affecting the airworthiness of the [aircraft]." 14 C.F.R. S 21.93(a). Davenport's failure to notify the FAA prior to his initial modification of the fuel system violated the operating limitation on his airworthiness certificate and prohibited Davenport from operating the aircraft without recertification. See 14 C.F.R. S 91.9(a) (1993) ("[N]o person may operate a civil aircraft without complying with the operational limitations . . . prescribed by the certificating authority of the country of registry.").

Davenport's failure to notify the FAA of his repeated modifications to his aircraft's fuel system clearly triggered the Policy Exclusion and released Avemco from any obligation to indemnify Davenport.

Davenport argues that the series of modifications he made to his aircraft's fuel system did not constitute a "major change" because the fuel system at the time of the crash was in the same configuration as at the time of the initial certification. We reject this argument. Common sense dictates that altering the method of delivering fuel to the engine of an aircraft has an obvious and substantial effect on the "reliability, operational characteristics, or other characteristics affecting the airworthiness of the [aircraft]." 14 C.F.R. S 21.93(a).2 The fact that Davenport made repeated changes to the fuel system did not remedy his failure to notify the FAA prior to making each change. Each change Davenport made to the fuel system was major, and each change therefore required FAA notification under the operating limitation.

Davenport also argues that the Policy Exclusion was vague and ambiguous, and that it should therefore be construed to allow coverage. "[W]ords in an insurance policy must be read in their ordinary sense, and any ambiguity cannot be based on a strained interpretation of the policy language." *Producers Dairy Delivery Co. v. Sentry Ins. Co.*, 718 P.2d 920, 925 (Cal. 1986). Furthermore, the "language in a contract must be construed in the context of that instrument as a whole, and in the circumstances of that case, and cannot be found to be ambiguous in the abstract." *Bank of the West v. Superior Court (Industrial Indem. Co.)*, 833 P.2d 545, 555 (Cal. 1992) (quotations and emphases omitted).

We find no ambiguity in Davenport's policy. The policy clearly linked Avemco's coverage to the continued validity of the FAA's certification of Davenport's aircraft. Because California courts do not find ambiguity in exclusions that similarly incorporate FAA requirements by reference, see, e.g., *Threlkeld v. Ranger Ins. Co.*, 202 Cal. Rptr. 529, 532 (Cal. Ct. App. 1984), we will not do so here.

Davenport finally argues that, even if there is no duty to indemnify, Avemco owed Davenport a duty to defend against pending state suits. Although the duty to defend is broader than the duty to indemnify, see *Horace Mann Ins. Co. v. Barbara B.*, 846 P.2d 792, 795 (Cal. 1993), no duty to defend arises if the undisputed facts establish that the insured is not entitled to coverage. *Montrose Chem. Corp. v. Superior Court (Canadian Universal Ins. Co.)*, 861 P.2d 1153, 1159 (Cal. 1993) (agreeing with lower court that, "where extrinsic evidence establishes that the ultimate question of coverage can be determined as a matter of law on undisputed facts, [there is] no reason to prevent an insurer from seeking summary adjudication that no potential for liability exists and thus that it has no duty to defend." (quotation omitted)). Because the facts viewed in the light most favorable to Davenport could not have established coverage under the policy,

Avemco was entitled to summary judgment on Davenport's allegation of a duty to defend.

Accordingly, we affirm the judgment of the district court.

### UPSHOT BY EDITOR

1. Make sure you have a current repairman's certificate
2. Send a letter to FAA FSDO about any modification you make to your plane and keep a copy in your file
3. Demand an answer from FAA in writing as to whether recertification is required
4. This court decision is now federal law that permanently governs us.
5. I am outraged that EAA would allow its chosen insurance carrier to assert a phony "policy defense" like this. This makes our insurance coverage uncertain and subject always to ambiguous and conflicting FAA interpretations of the Regs.

### VAPOR LOCK IS A PROBLEM!

(But everybody does not perceive it)

Triggered by the article in the March Cleco, your editor has had several e-mail communications with Bob Hasson, President of Chapter 81 in Tucson Arizona. Bob initially wrote that he had installed a Piper shroud and cool air duct over the engine pump in his RV-6A. In his opinion, this device plus the electric fuel pump was a sufficient safeguard, because he could monitor the danger of vapor lock by monitoring his fuel pressure. I then asked Ben Ellison (who has done much research about vapor lock in connection with his throttle body) what he thought of this monitoring idea. Here is his reply:

March 30, 1999

Dear Doug,

I think your suggestion about monitoring fuel pressure as a means to detect vapor formation has some potential. I know that there are some interesting dynamics that accompany the transition of a single phase fluid to a two phase

system, but I don't know if the "snap shot" information you would get by looking at a gauge now and then would give a useful warning of impending vapor lock. The idea is certainly worth some experimentation.

The following is a brief description of what happens to fuel pressure when vapor is forming in the fuel system. If you were to continuously monitor fuel pressure downstream of the pump using a device having good frequency response, you would see an interesting array of superimposed dynamic signatures. You would see pressure pulses from the pump at a frequency \* engine RPM, along with more random and subtle fluctuations caused by the needle/float (or diaphragm/ICV valve in a TBI) always "hunting" for, but never finding, an equilibrium position that matches engine fuel demand with metered fuel flow. What happens when vapor begins to form depends on whether you have a float-controlled carburetor or a diaphragm controlled device such as our TBI or a constant flow fuel injector.

#### Float carburetor:

As fuel temperature rises one of the first places vapor forms is in the float bowl, where a portion of the fuel flashes to vapor owing to the sudden drop in pressure across the needle valve. At low rates of vapor formation this vapor passes harmlessly through the float bowl vent and the engine generally continues to operate normally. Under these circumstances a pressure trace would show some change in the amplitude (and maybe the frequency) of the "hunting" characteristic described above. As the rate of vapor formation increases it can reach a point where foaming in the float bowl causes the float to sink at the same time that foam chokes the vent. Although one usually associates vapor lock with lean engine failure, this scenario in which fuel foams or boils in the float bowl is described in SAE Technical Paper No. 821202, (a copy of which I am sending by U.S. Mail) and can result in a rich failure of the engine.

#### Throttle Body Injector:

As with the float carburetor the first point of vapor formation in a TBI or fuel injection system is usually the inlet control valve (ICV). These diaphragm-controlled devices have no vent allowing purging of vapor; therefore it must all pass through the fuel metering system. Our TBI however has an inlet control valve (IVC) with a very steep opening gradient, allowing four-foot long fuel line vapor bubbles to pass through very quickly without power interruption when operating above 50% power. A monitoring device tracing fuel pressure would no doubt show some very vigorous wiggles as the IVC goes full open to pass vapor, only to slam shut again when flooded with liquid fuel. The TBI as well as fuel injection systems are more likely to manifest unstable operation due to vapor when at idle or at low power settings. This is caused by the lower fuel flow velocity allowing fuel to be resident in the hot engine compartment for longer periods of time permitting greater temperature rise. The occasional practice of installing an orifice restricted fuel return line bleeding fuel back to the fuel tank, serves to maintain a higher fuel flow velocity thereby minimizing vapor formation.

#### Fuel pump:

Frequently the fuel pump is the first point in the fuel system to experience vapor formation, first because it generally contributes to the heating of the fuel owing to conductive heat transfer from the engine and second, because the fuel is seriously bruised and abused as it passes through the pump. All the work done on the fuel by the pump ultimately is converted to heat energy. In the case of an electric boost pump the heat input to the fuel is exacerbated by the fact that the fuel cools the electric heating of the pump.

I had some personal experience with fuel pump heating on my Pitts Special 20 years ago. In that case the onset of vapor resulted in pump cavitation with an extreme pressure fluctuation which conveniently preceded any engine symptoms. This problem was easily corrected by installing a blast-cooling shroud around the pump.

Suggestion:

The main thing that occurs when a single-phase fluid changes to a two-phase system is that it becomes possible for pressure in the fuel line to vary from one location to another. You might be able to exploit this fact by using some sort of differential pressure gage (like an airspeed indicator) to monitor changes in pressure differential between a point just outside of the fuel pump and another point just ahead of the carburetor. Under non-vapor conditions you may see a more or less steady-state differential due to the frictional line loss, while during vapor formation a much more vigorous fluctuation in differential may be observed.

I hope the above is useful.

Best regards

**Ben Ellison**

#### **Editor's Note:**

The SAE Bulletin drafted as a result of 1983 studies on autos describes boiling hot gasoline as foam. When this foam fills the carburetor, the float, being unsupported by liquid, drops and sometimes stalls the engine due to the fact that it is too rich. If the foam fills the engine pump, on the other hand, the carburetor can be starved for gasoline and the engine will stall because it is too lean. So the subject is complicated.

I forwarded Ellison's e-mail to Bob Hasson, and the following is Hasson's reply:

Doug,

The reason some aircraft are registered in the EXPERIMENTAL category is because they are indeed experimental! Each builder of an experimental aircraft must decide for himself what quality of craftsmanship and materials they will accept, as well as what system modifications to the designers plans he/she feels prudent. I have made the determination (based on 38 years of aircraft maintenance) that I will address vapor lock via monitoring fuel system pressure and installing a fuel pump cooling shroud. That is it, period! Everyone else will have to make the same determination. After they research the issue they

may determine that they will take absolutely no action (as have virtually all certified aircraft manufacturers), or they may determine that the threat of vapor lock is so great it is simply unsafe to fly a piston powered light airplane. Or more likely, they may take a few reasonable precautions and just get on with their lives.

Has your chapter debated a corrective modification for the most prevalent fuel system problem----- running out of fuel? How about mid-air collisions or in-flight oil, electrical, or fuel fires? How about continued VFR flight into IFR meteorological conditions. Now here are some real problems that have a much higher probability of occurrence. If one looks at statistical data as to how pilots meet their demise in flight, with few exceptions, it will be one of the above and not vapor lock.

See ya,  
Bob

#### **REGULAR MEETING MINUTES OF MARCH 24 MEETING**

The Treasurer, Louis Goodell reported that we had:

- Savings: \$2576.01
- Checking \$ 695.93

The minutes of the February meeting were approved.

Two new members, Harold Marchant and Guy Jones were welcomed. Harold is retired TWA and wants to build a Pacer. Guy has no ratings and no plane yet, but he is going to Lakeland and to Oshkosh.

The speaker, Brent Stockwell, owner of Balloon Excelsior Inc. of Oakland, so fascinated us with his balloon lore, that we questioned him until 10 PM and did without the usual introductions and tales by our own members. He said that balloons claim a lot of "firsts:" First flight in 1783: First flight to 35000 feet before 1903: First parachute jump: First airmail: First air to ground message etc. There are four types of balloons: gas, hot air, combination gas&hot air, and the super pressure balloon in which the gas is contained in a non-expandable envelope. He said the CIA used thousands of balloons and operated under the name Potomac Sand & Gravel Co.

The recent round the world flight was in a combination balloon with helium gas and hot air. A balloon cannot carry enough hot air gas for a round the world flight so it uses helium in the daytime and when the helium cools and contracts at night, the balloon is kept aloft with hot air. We have a good supply of helium in Texas, for U.S. balloons, but Europeans usually use hydrogen because helium costs 10 times as much as hydrogen.

His company gives balloon flights and lessons to a balloon rating. No medical is needed. A balloon is somewhat controllable because the wind direction varies with altitude. He always has a chaser truck following each of his balloon flights. One can get a rating in about 10 hours. The balloon rental costs \$2250 for 8 hours because of the very high maintenance costs. These are only a few of dozens of interesting facts from a fascinating speaker.

#### **BOARD MINUTES APRIL 1 and APRIL 3, 1999**

The four members of the Board made a goodwill visit to the monthly meeting of Chapter 663 in Livermore on April 1. We renewed old friendships. At the regular Board meeting on April 3, we discussed Brad Poling's Inquest, the problem of delinquent dues, FAA policy about Experimental planes over densely populated areas in Phase II. The Board will attend an official EAA Leadership Conference in Placerville on Saturday, May 15. All Chapter members interested in EAA leadership are invited to attend. If you want to go, phone the EAA at 920 426 4876 or e-mail EAA at [chapters@eaa.org](mailto:chapters@eaa.org) and make a reservation.

#### **NEW CHAPTER 393 MEMBERS SOUGHT!**

Louis Goodell wrote a Flyer inviting interested persons to visit and join our Chapter. President Ron has posted the flyer at each flight school, flight club, FBO he could think of. You can help. We have more flyers for you to post. Invite any interested person you may know of, to visit one of our meetings. .

## CALENDAR

April 24 Visalia Fly In & Barbecue  
April 28 Regular Chapter 393 Meeting  
May 1 Chapter 393 Fly Out  
May 28-30 Watsonville Fly In and Airshow  
June 19 Buchanan Open House and EAA  
Display  
June 19-20 Moffett Field Airshow  
July 17 Chapter 393 Picnic  
July 28-August 3 Oshkosh  
September 10, 11, 12 Golden West  
September 16-19 Reno Air Races  
October 7-10 Copperstate

### CHAPTER FLY OUT

15 persons participated in a fly-out to Columbia on March 27.

The next fly-out is on May 1, 1999.

We meet at Ron Robinson's Hangar D17East at 11AM on the Saturday following the Regular Meeting. There are usually extra seats available. The next Fly Out will be on March 27, 1999 weather permitting.

### EAA WANTS YOUR E-MAIL ADDRESS

So EAA can send you an electronic newsletter called Chapter E-Gram. Send your address to Chapters@eaa.org

### CLASSIFIED ADVERTISING

Rick Lambert has a Bernie Warnke 68x79 wood prop in good condition for sale. \$200 obo. 934-5007 or work, 676-9377

Doug Page has 2 unopened cans of sloshing compound (no guarantees about shelf life), a gallon can of "Bondo" to attach your fuselage jig semi-permanently to the floor, and a prop governor for a Lycoming 0-360. 925-943-1581

### NEWSLETTER SUBMISSIONS

Submissions may be e-mailed, hand written, typed, or on any IBM diskette (in ASCII or MS Word). The deadline for submissions to the editor is the 14th of every month (newsletter is produced and mailed by the 17th). The editor's address is:

400 Arbol Via Walnut Creek CA 94598

Telephone: 925- 943-1581

E-Mail: dougpage@earthlink.net

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### APRIL FOOL FROM Bob Belshe

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Top Headlines from AVweb's NewsWire

#### GETTING FUELISH: FAA FOLLOWS APPROVAL OF 82UL WITH 100LW...

General Aviation may finally get the lead out, thanks to the second significant fuel advance in a year: a 100LL avgas replacement. Earlier this year, an 80-octane avgas replacement -- dubbed 82UL (for ultra-low lead) -- was announced by industry. Now, those who fly with high-compression and turbocharged engines will be able to benefit new-technology fuels, also. The just-announced 100LW offers the same detonation margins as 100LL but with no lead and a lower specific gravity.

#### ...MOLECULAR ENGINEERING ALLOWS LIGHTER FUEL, GREATER RANGE...

100LW is identical to 100LL except that it weighs 17 percent less per gallon (5.05 pounds at 60 deg. F). The weight reduction is achieved by replacing heavy molecules in the fuel -- which pass through the engine unburned -- with smaller, lighter molecules that burn completely. Each large molecule is replaced with two smaller molecules that occupy the same volume but weigh just half as much. Since about 19.4 percent of 100LL consists of "heavy ends," an overall 16.63 percent weight reduction is achieved.

#### ...TRANSITION PLANS ANNOUNCED

The new 100LW is compatible with 100LL and may be stored, transported, and transferred in the same tanks and pipes. Pilots may mix 100LW and 100LL in their tanks with no ill effects. The FAA says it may allow temporary increases in max gross takeoff weight of up to 15 percent until all 100LL fuel is purged from a plane's tanks. Limited quantities of 100LW should be available this



summer, and the new fuel is expected to entirely replace 100LL by the year 2001.

**RECOMMENDED WEB SITES**

- [www.avweb.com](http://www.avweb.com) by Bob Belshe
- [www.airnav.com/fuel/](http://www.airnav.com/fuel/) on fuel prices by Scott Achelis
- <http://www.avweb.com/toc/columns.html> on use of welder's oxygen in flight from Chapter 723 Newsletter
- <http://www.eaa.org> to find other EAA Chapters
- [www.gas-turbines.com/hobby/nt5.htm](http://www.gas-turbines.com/hobby/nt5.htm) about making a gas turbine engine from a turbocharger

EAA Chapter 393 Concord, CA  
Membership Renewal & New Membership

Date: \_\_\_\_\_

Dues will be due in February, they are \$20.00 dollars a Year. Your mailing address tells when it is due,. some have paid ahead.

Send this Form in with \$20.00 dollar check or bring it to the meetings.

First Name: \_\_\_\_\_ MI. \_\_\_\_ Last Name: \_\_\_\_\_

Address: \_\_\_\_\_ Spouse Name: \_\_\_\_\_

City: \_\_\_\_\_ State \_\_\_\_\_ Zip ; \_\_\_\_\_

Home Phone: \_\_\_\_\_ WorkPhone: \_\_\_\_\_ Pager# \_\_\_\_\_

E-Mail Address \_\_\_\_\_

Project / Plane \_\_\_\_\_

EAA National # \_\_\_\_\_ Exp.Date: \_\_\_\_\_

Licenses /Ratings: \_\_\_\_\_

Hanger # \_\_\_\_\_ Eastor West Hanger Phone # \_\_\_\_\_

What are you Flying Now: \_\_\_\_\_

Your Area of Expertise or Interests \_\_\_\_\_

Mail Checks To : EAA Chapter 393  
P.O.Box 272725  
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make checks out to **EAA Chapter 393**

THE EXPERIMENTAL AIRCRAFT ASSOCIATION  
CHAPTER #393 NEWSLETTER, APRIL, 1999

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